

IMAGIN

**SPECIAL  
POINTS OF  
INTEREST:**

- **REGISTER NOW!!!! - The 2016 IMAGIN Annual Conference is being held May 15-17, 2016 at the Great Wolf Lodge in Traverse City, MI**
- **Volunteer with IMAGIN by joining one of our Teams today.**

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# IMAGINews

WINTER 2016



## Invasive Species in Michigan

When a Michigander hears about invasive species, visions of ecosystem detrimental fauna like Asian carp, zebra mussels, or the emerald ash borer come to mind. However, flora (plant) invasive species are oftentimes overlooked and have similar negative impacts on their ecosystems. By definition, invasive species are non-native intruders that can cause considerable harm to indigenous species in an ecosystem. Recently the state legislature approved an initiative to devote \$5 million of funding to help mitigate invasive species introduction and proliferation. Starting in October 2014 the Michigan DNR began accepting grant applications. Receiving 68 applications, the MDNR had proposals that totaled more than \$15 million. Luckily, the Ottawa Conservation District/West Michigan Cooperative Invasive Species Management Area (CISMA) was awarded \$393,000 of grant monies to aid in their fight against invasive species.

Upon notification of the award, the Ottawa County Parks & Recreation Department (who is part of the Ottawa Conservation District) approached the GIS Team about developing a web-based field data collection application. The Parks & Recreation Department wished to give its employees and

volunteers the ability to locate, document, photograph, and monitor plant invasive species in its county natural areas. Immediately Marshall Boyd, GIS Programmer/Technician began researching and developing a schema that would fit the needs of the customer. After meeting with the Parks & Recreation Department, it was determined that any schema would need to be able to track required information that would be reported back to the Midwest Invasive Species Information Network (MISIN). Over the course of the next few days, the GIS Team developed a schema that would allow for proper reporting back to MISIN. Following schema development, Boyd built the web application in the Geocortex Essentials software suite by Latitude Geographics.

Users of the application are utilizing an iPad Air 2 with an internal GPS. In a normal

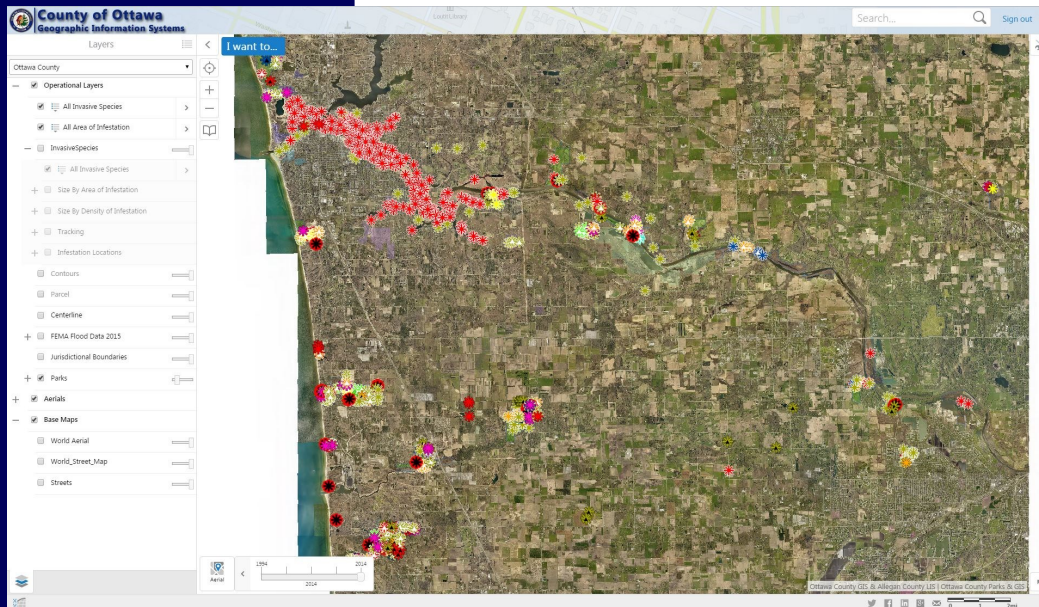
workflow, a user will field locate an invasive species. Three means of acquiring a location are available in the app: 1) the user can have the internal GPS use their location, 2) they can add a point using their finger, or 3) they can enter in the latitude/longitude information. After the location is captured, the user fills out required fields such as name of the location, invasive species, area of infestation, and treatments. Internal workflows automatically generate a unique ID and populate the genus for the invasive. In nature, it is rare to have a single invasive plant. Most times an area is colonized and it is not practical to create a point for every location; nor is a single point representative. The application has a workflow to allow the user to create an infestation area by drawing a polygon around the area or walking the perimeter capturing

(Continued on page 2)

**Aerial view of phragmites treatment in the Grand River**



# Invasive Species in Michigan



Main page of Ottawa County invasive species web application

**“Invasive Species” means an alien species whose introduction does or is likely to cause economic or environmental harm, or harm to human health**

Definition of Invasive Species  
from Executive Order 13112,  
National Park Service

data from the internal GPS to accurately map the area of infestation.

In addition to collecting and documenting the presence of invasive species in Ottawa County Parks, the application also houses functionality to record treatments. Typically when an invasive species is located, it is photographed and recorded. Later an employee may revisit the site and apply a treatment. At this point the employee can update the previous recorded data and add a treatment status. Those treatments are then monitored on a yearly basis to determine the effectiveness of the treatment and retreat as necessary. Aside from the typical treatment techniques, the Ottawa County Parks & Recreation Department utilizes some very unique treatment methods. The department has enlisted the help of goats to reduce the presence of

invasives. The use of goats is referred to as “prescribed browsing” where the goats consume woody invasives. This reduces the amount of herbicides applied, is more cost efficient for areas of high infestation, and also eventually allows for easier access to difficult locations. The goats are scheduled for a three property rotation with a second visit scheduled for follow-up “treatment”. Goats have been used to mitigate the presence of poison ivy, autumn olive, oriental bittersweet, buckthorn, and honeysuckle. Finally, the application has reporting functions which will build a report for a given location summarizing all required data.

Since the release of the application, the Ottawa County Parks Department has documented invasive species in 39 parks and natural areas with nearly 1,300 individual

sightings. Non-native phragmites stake claim as “most frequently reported invasive.” Phragmites tend to outcompete native plants which reduces biodiversity. These invasives are normally found in wetlands, ditches, and banks of ponds. Use of the application has spread to Allegan County and may be used by all seven member counties of CISMA. All told, what started out as an internal application has spread and become a regional data collection application to continue the fight against the spread of invasive species.

More information on the prescribed browsing effort can be found at: [https://www.miottawa.org/Parks/invasive\\_species.htm](https://www.miottawa.org/Parks/invasive_species.htm). For more information on invasive species go to: <http://www.misin.msu.edu/>

~ Submitted by Pete Schneider, GIS System Analyst, Ottawa Co., [pschneider@miottawa.org](mailto:pschneider@miottawa.org)

## User input of detailed information on invasive species

Species Information	
Please enter the following required information	
Location *	Pigeon Creek Park
Park Name (if not listed)	
First Name *	John
Last Name *	Doe
Species *	Butter-n-eggs
Species Name (if not listed)	
Sequence Number (Waypoint) *	1
Area of Infestation *	< 1,000 sqft
Density of Infestation *	Patchy (a mix of sparse and dense a
Initial Treatment Status *	Untreated
Your Organization *	Ottawa County Parks
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	



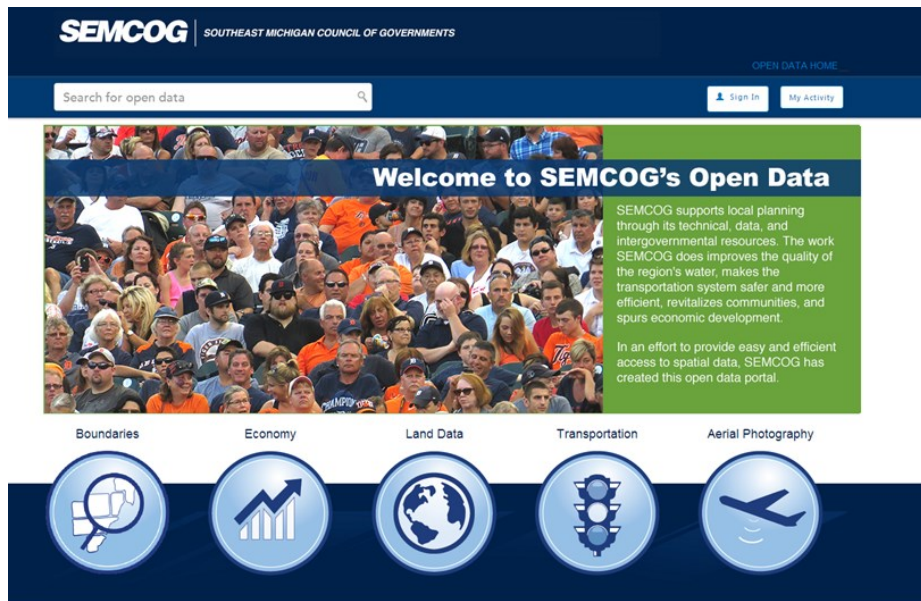
# Member Updates: Southeast Michigan Council of Governments

Southeast Michigan Council of Governments (SEMCOG) is a regional planning partnership of governmental units in the seven-county region of Southeast Michigan. Our principle purpose is to help local governments improve and maintain the region's transportation systems, environmental quality, economic interests, and infrastructure. We maintain a large amount of GIS data to support regional planning, modeling, and other efforts. Here are some of the latest projects we've been working on to support our members and our planning work.

## Open Data

SEMCOG has launched its Open Data Portal! The purpose of this portal is to provide efficient access to spatial data. The data can be previewed, opened in GIS software, and downloaded in a variety of formats. ArcGIS Open data was used, along with ArcGIS Server, ArcSDE, and SQL Server for the database. Datasets available range from community boundary shape files to county-wide MrSID files. Please take a look and let us know what you think!

## Sample map area near Detroit Metropolitan Airport



Questions? Contact the SEMCOG Info Center | ©2015 SEMCOG, Southeast Michigan Council of Governments

## Traffic Volume Map

SEMCOG has developed an interactive Traffic Volume Map which represents Average Annual Daily Traffic (AADT) for roads that are eligible for federal aid. The map was developed using CartoDB which allows larger datasets to display faster than other programs. The map is interactive and allows users to zoom into a segment and click on it to get detailed information.

<http://maps.semco.org/>

## SEMCOG's Open Data Portal Main Page

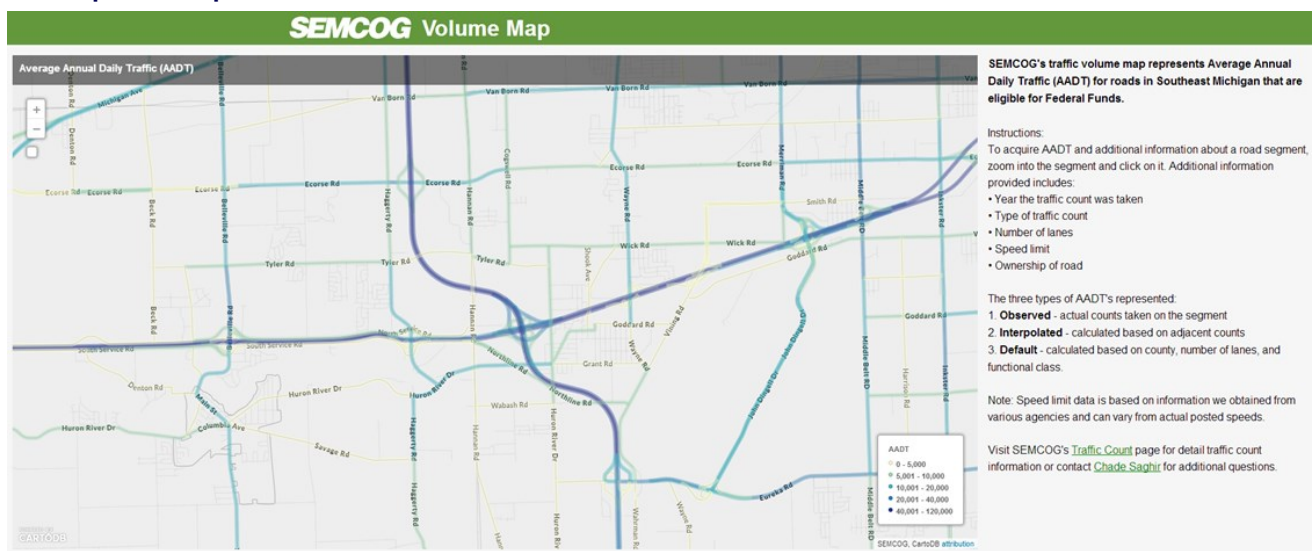
<http://maps.semco.opendata.arcgis.com/>

*TrafficVolume/*

Information includes AADT number, year traffic count was taken, type of traffic count, number of lanes, speed limit, and road ownership.

SEMCOG's volume map is based on traffic counts that we received from local communities, county road commissions, the Michigan Department of Transportation, and consultants specializing in traffic data collection.

*(Continued on page 4)*





**REGISTER NOW!**  
**IMAGIN's 2016**  
**Annual Conference**  
 will take place  
**May 15-17, 2016 at**  
**the Great Wolf**  
**Lodge in beautiful**  
**Traverse City, MI**  
 Visit our website to  
 register:

[www.imagin.org/  
 conference](http://www.imagin.org/conference)



## Member Updates: SEMCOG

Traffic counts are used by transportation planners and engineers to identify existing traffic problems and solutions, site selection for local economic development, monitoring traffic-related pollutants and conformance with air-quality standards, and completing grant proposals for transportation funding. State legislatures and the U.S. Congress use counts to make decisions regarding the need for and allocation of state and federal funds. This new map provides a user-friendly way to view the data and provide feedback to SEMCOG for improving our data.

### Building Footprints Map

As reported in the Summer 2014 edition of IMAGINews, SEMCOG has been working on creating a region-wide building footprints data layer, which represents the outline of each building on the ground as of April 2010. Created using the imagery and LiDAR data acquired from SEMCOG's 2010 aerial photography flight, LiDAR points were analyzed to determine the likely location of structures on the ground, which

were then digitized by tracing the building outlines over the imagery in a two-dimensional environment. The resulting 2.5 million building polygons were then split using parcel boundaries and attributed with a SEMCOG-developed building model, primarily using local assessing data to populate location attributes (parcel number, address, etc.) and the physical characteristics (square feet, stories, year built, etc.) of the buildings. As building-level data is the primary input into our 30-year regional development forecast, several other attributes needed for forecasting and planning activities were added to the building footprints layer, including assigning a building type and identifying the number of housing units in each structure.

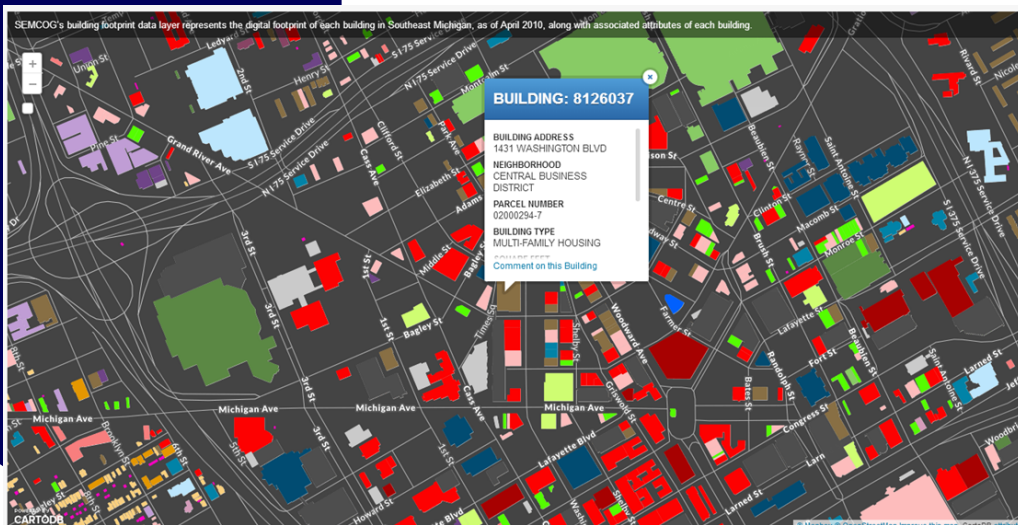
As the building footprints layer is a valuable resource for planning at the local level, we recently developed an online interactive map of building footprints in the region. It was developed in CartoDB and displays buildings by type from a regional level down

to street level. Each building can be identified by clicking on it, which will display an information box containing the most significant attributes of the building – building address, name of the municipality or neighborhood in the case of Detroit, parcel number, building type, square footage, number of nonresidential stories, housing units, and year built. In addition, the information window contains a link allowing anyone viewing the map to send a comment on that building through email to our staff. While building footprints data cannot be downloaded using the map due to the size of the data layer, local units of government can contact us directly to obtain the footprints layer for their geographic area. <http://maps.semco.org/BuildingFootprints/>

We are continually updating the building footprints layer, and will be making several enhancements to both the online map and data layer itself in the near future. We will remove buildings demolished since April 2010, as well as add new buildings constructed over the last five years. We are also working on additional ways to visualize buildings data, and will likely debut online maps that visualize urbanization in the region and provide a three-dimensional perspective of buildings in the near future.

If you would like further information on our open data portal or the new mapping applications, please contact our Information Center at 313-324-3330 or [infocenter@semco.org](mailto:infocenter@semco.org)

### Sample area in Detroit





# IMAGIN 2016 Annual Conference

Before you know it the snow will be gone (if it ever arrives!), and the 2016 Annual Conference will be upon us. Mark your calendars now for May 15 – 17, 2016 and join us at the Great Wolf Lodge in Traverse City for an amazing educational and networking event exclusively for the GIS community. Registration is open and rates are just \$285 for members. For complete details and hotel information, visit the IMAGIN website at [www.imagin.org](http://www.imagin.org).

Want a larger presence at the conference? The Conference Committee has issued a call for papers for presentation at the event. Topics include: Transportation GIS; Utilities/Asset Management; Mobile and Web GIS; Local Government GIS; Assessing and GIS; Natural Resources GIS; Open Source GIS; Data and Database Management; Public Safety; and Surveying. Visit the website, [www.imagin.org](http://www.imagin.org), for information on how to submit your abstract. Deadline is March 1st.

Sponsorship Opportunities are available, many on a first come, first served basis, some with a limited quantity. A wide variety of options and price points are available and complete details and printable packets are available on line. See you in May!

*The IMAGIN Conference Committee*



**SUBMIT YOUR ABSTRACT NOW**

**MAY 15-17, 2016**

**GREAT WOLF LODGE,  
TRAVERSE CITY, MICHIGAN**

**IMAGIN 2016**  
ANNUAL EDUCATIONAL  
CONFERENCE  
25 YEARS OF MAPPING  
THE MITTEN

**WHY ATTEND?**

- + RENEW YOUR EXCITEMENT FOR GIS
- + IMPROVE PRODUCTIVITY
- + NETWORKING WITH PEERS
- + ENJOY NORTHERN MICHIGAN'S BEAUTY

**SUBMIT YOUR ABSTRACT ON:**

- TRANSPORTATION GIS
- UTILITIES/ASSET MANAGEMENT
- MOBILE & WEB GIS
- LOCAL GOVERNMENT GIS
- ASSESSING AND GIS
- NATURAL RESOURCES GIS
- OPEN SOURCE GIS
- DATA AND DATABASE MANAGEMENT
- PUBLIC SAFETY
- SURVEYING

**REGISTER NOW AT  
IMAGIN.ORG**

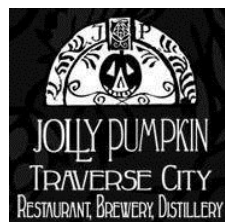
## IMAGIN 2016 Conference Beer and Wine Tasting!

Sunday, May 15th @ 4-8pm. \$10 per person, pre-registration required.

Includes charter bus transportation to wine or beer tasting @ Bonobo Winery and Jolly Pumpkin Brewery.

Dinner @ Fire Fly Restaurant during the final stop before heading back to Great Wolf Lodge!

*\*Attendees are responsible for individual wine/beer purchases and dinner costs.*



13512 Peninsula Drive  
Old Mission Peninsula  
Traverse City, Michigan 49686  
[www.jollypumpkin.com](http://www.jollypumpkin.com)



12011 Center Rd  
Old Mission Peninsula  
Traverse City, MI 49685  
[www.bonobowinery.com](http://www.bonobowinery.com)



310 Cass Street  
Traverse City, MI 49684  
[www.tcfirefly.com](http://www.tcfirefly.com)

*Can't make the bus? Meet the group for dinner around 6pm @ Fire Fly!*

## IMAGIN 2016 Conference 4th Annual Euchre Tournament!

Monday, May 16th after dinner (on own). No cost to enter, pre-registration preferred.

Tournament will be held in the main session room within the Great Wolf Lodge's Conference area

Look for sign-up emails leading up to the conference.

Just a reminder that all membership dues expired on December 31st and need to be renewed for 2016. If you haven't received a paper or emailed notice and need to renew for the year, contact the IMAGIN Business Office at [info@imagin.org](mailto:info@imagin.org) or 517-338-3035x 709.



## Membership Renewal

It's time to renew your IMAGIN Membership for 2016!

Dues are:

- \$175 Supporting Organizations,
- \$75 Individuals
- \$40 Supporting Organization Employees
- \$25 Students.

Membership may be renewed online at [www.imagin.org](http://www.imagin.org) or if you need a copy of your renewal invoice, please contact the Business Office at [info@imagin.org](mailto:info@imagin.org) or at 517-338-3035 x709. When your dues lapse so does communication with IMAGIN. Don't miss out on the great things in store for 2016. Renew Today!

## 2015 Student Poster & Paper Competition Update

Planning is well underway for IMAGIN's annual Student Poster & Paper Competition.

Join your colleagues for an educational display and networking at Constitution Hall in Lansing. The competition will be held on **Tuesday, April 5, 2016.**

IMAGIN has partnered with the State of Michigan to run concurrently with their bi-monthly user group meeting.

Come and see what the future of GIS looks like, as students from around the state

present their work to a professional audience in a competition to win scholarships.



## Upcoming Events

- January 8, 2016—IMAGIN Board of Directors Meeting (teleconference)
- February 4, 2016—Statewide GIS Users Group Meeting in Lansing
- February 22-25, 2016—URISA GIS/CAMA Conference in Savannah, GA
- February 12, 2016—IMAGIN Board of Directors Meeting
- March 8-11, 2016—ESRI Developer Summit in Palm Springs, CA
- March 10, 2016—Southeast Michigan GIS User Group Meeting in Detroit, MI
- March 11, 2016—IMAGIN Board of Directors Meeting (location to be determined)
- March 29-April 2, 2016—

AAG Annual Conference in San Francisco, CA

- April 5, 2016—IMAGIN SPPC Competition & Statewide GIS Users Group Meeting in Lansing
- May 15-17, 2016—IMAGIN's Annual Conference in Traverse City, MI

*For Complete Details on all these events go to [www.imagin.org](http://www.imagin.org)*

*Have an upcoming GIS related event you want to advertise? Send the date, time, and place to [communication@imagin.org](mailto:communication@imagin.org)*

## IMAGIN Awards Nominations

IMAGIN is now accepting applications for the IMAGIN Geospatial, GIS for Everyone, and GIS Innovation awards. Applications are available on the IMAGIN website ([www.imagin.org](http://www.imagin.org)) and are due on **April 8, 2016**. The awards will be presented at the Annual Conference in May.

The **IMAGIN Geospatial Achievement Award** is the highest award given by IMAGIN and is presented to a member in recognition of outstanding contributions to the geospatial technology field, their contribution to the IMAGIN organization and its geospatial professionals, colleagues, members and the public that it serves.

The **GIS for Everyone Award** is presented to an organization that seeks to make GIS data or analysis accessible to other organizations and/or to the public. GIS organizations that strive to disseminate and share data make spatial data available to everyone.

The **GIS Innovation Award** is presented to an organization that finds innovative ways to use geospatial solutions to enhance workflow processes. Candidates for this award should have successfully implemented a geospatial technology, service, or application that is new and innovative to their organization. Applicants will be judged on collaborative efforts, contribution to the workflow, and original ideas.

## IMAGIN Board of Directors 2016 Elections

The Nominating/Governance Committee is looking for candidates to serve on the IMAGIN Board of Directors!

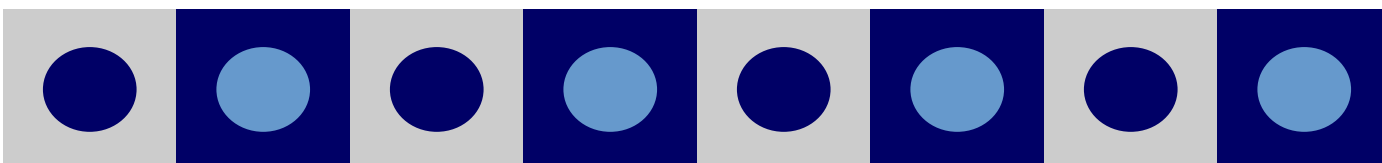
This is an exciting opportunity for members to participate in the leadership of IMAGIN and to set its course for the future. Eight of the fifteen Board seats are open for election, each of which will serve a two-year term. Board meetings are typically held the second Friday of each month, along with the Annual Meeting which is held at the Conference. While a select few meetings are held face-to-face, most meetings are held via teleconference to accommodate limited travel allowances and board members located throughout the State.

You may nominate yourself or someone else that you believe has leadership qualities. Please submit a few paragraphs listing qualifications, background, and any other information you would like posted in the candidate write-up.

**Nominations will be accepted until**

**February 29, 2016**

If you are interested or would like to nominate someone, please contact Bill Rowe, Chair of the Nominating/Governance Committee at [BRowe@mqtco.org](mailto:BRowe@mqtco.org) or Lori Schultz at [lschultz@phdm.org](mailto:lschultz@phdm.org).



## Vendor Advertising Opportunity

Would you like to advertise your business or agency in our newsletter? IMAGIN will once again be publishing their printed newsletter (IMAGINews) on a quarterly basis. Take advantage of the opportunity to reach all of its members for a minimal fee. Right now you can get a business card-sized ad for \$75 per issue or \$200 for 4 issues. If you purchase 4

issues worth of ads at one time you will also be eligible for a half page Vendor Spotlight article (on a first-come, first-served rotation), where you can highlight anything related to your business.

To purchase an ad or for more information please contact the IMAGIN Communication Team at [communication@imagin.org](mailto:communication@imagin.org)



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Fax: (866) 298-2115

**Business Card-sized ads will be a similar size to the above (about 1/8 of a page) and of your own design.**



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**Improving Michigan's Access to  
Geographic Information Networks**

WINTER 2016

**IMAGIN is a non-profit professional development organization committed to providing opportunities for its members to network with professionals who are using, creating, or maintaining spatial resources within Michigan. IMAGIN serves as a crossroads for spatial information users/developers at all levels of government, business, and non-profit organizations by providing its members partnership opportunities to recognize, share, and create spatial data resources for both traditional and new applications.**

**Thomas VanBruggen**, *IMAGIN President & Coeditor*  
**Sarah Merz**, *IMAGIN Vice President, Communications Team Lead, and Coeditor*  
**Lori Schultz**, *Coeditor*  
**Michael Woods**, *Coeditor*  
**Maryellen Jansen**, *Coeditor*  
**Brodey Hill**, *Coeditor*  
**Janet Mocadlo**, *Coeditor*

IMAGINews publishes original, timely, and innovative articles and news items that advance knowledge regarding GIS, related technologies, and their use within Michigan. IMAGINews welcomes submissions from IMAGIN members and others. Please send article submissions in Microsoft Word format to [communication@imagin.org](mailto:communication@imagin.org).

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